

GP-303664

CONTINUOUSLY CAST MAGNESIUM CONTAINING, ALUMINUM
ALLOY SHEET WITH COPPER ADDITION

ABSTRACT OF THE DISCLOSURE

A magnesium, manganese and copper-containing aluminum alloy sheet material suitable for use in high elongation forming processes is produced according to an improved thermomechanical process. The sheet material is produced by continuous casting with an as-cast gage of 5 to 35 millimeters and immediately hot rolling with a final strip exit temperature between 200°C and 350°C and then coiling. The hot rolled coil is annealed at 450-560°C to homogenize the microstructure. After cooling to ambient temperature, the coil is cold rolled to desired sheet thickness with a net gage reduction of 50-90%. After suitable recrystallization of the cold worked microstructure the sheet is ready for hot, high elongation forming.